

THE HAWK MOTHS (LEPIDOPTERA: SPHINGIDAE) OF DAUAN ISLAND, NORTHERN TORRES STRAIT, QUEENSLAND

R.B. LACHLAN¹ and A.I. KNIGHT²

¹Entomology Department, Australian Museum, 6 College St, Sydney, NSW 2010

²70 Exton Road, Exton, Tas 7303

Abstract

Records are provided for 31 species of hawk moths from Dauan Island, northern Torres Strait. Three species, *Acherontia lachesis* (Fabricius), *Megacorma obliqua* (Walker) and *Theretra insularis insularis* (Swinhoe), are newly recorded from within Australian limits and two further species, *Hippotion scrofa* (Boisduval) and *Nephele hespera* (Fabricius), have extended their recorded northern Australian ranges.

Introduction

The hawk moths of the Torres Strait are not well documented when compared with Queensland and the remainder of Australia. This is particularly so in the case of the northern islands that are closer to Papua New Guinea than to Cape York Peninsula. Moulds (1985) recorded ten species of *Macroglossum* Scopoli from islands in the southern Torres Strait below Latitude 10°S. Lachlan (1988) recorded *Daphnis doherityi* Rothschild from Dauan Island and *Eurypteryx molucca* R. Felder from nearby Boigu Island. Common (1990) cited only two species, *Daphnis placida placida* (Walker) from 'the islands of Torres Strait' and *Hippotion velox* (Fabricius) 'from Thursday Island to northeastern New South Wales'. The newly described *Gnathothlibus australiensis* Lachlan was recorded from Dauan Island by Lachlan (2004).

Dauan Island (9°25'S, 142°32'E) lies about 9 km south of the Papua New Guinea southern coastline, 4.5 km WSW of Saibai Island and approximately 125 km due north of Cape York. The island itself is only about 2.5 km from E to W by 2.5 km from N to S and is dominated by Mount Cornwallis, the second highest point in Torres Strait at 295 metres. The slopes of this granite mountain are covered predominately with monsoonal vine thickets, grading to grassland and brackish areas at high water level with mangroves on the mudflats and sandy beaches.

Very little rain fell during the extensive 2004 survey, occurring mostly at night. Most days were sunny or slightly overcast with only a few days of strong wind.

Our first survey was carried out in early January 1987 by RBL. The second, far more extensive survey was conducted between 14 January and 2 February and between 16 February and 2 March, 2004 by AIK. The 31 species collected during these surveys are listed in Table 1.

All specimens are in the collection of RBL; duplicates are held by the Queensland Museum, Brisbane and the Australian Museum, Sydney.

Table 1. List of hawk moths collected on Dauan Island, northern Torres Strait, during the 1987 and 2004 surveys. An asterisk (*) indicates a previously unrecorded species within Australian limits.

Species	Notes
<i>Agrius convolvuli</i> (Linnaeus)	Common
<i>Acherontia lachesis</i> (Fabricius) *	One male
<i>Megacorma obliqua</i> (Walker) *	One male
<i>Psilogramma papuensis</i> Brechlin	Common
<i>Cephonodes picus</i> (Cramer)	Two males
<i>Gnathothlibus erotus eras</i> (Boisduval)	Very common
<i>Gnathothlibus australiensis</i> Lachlan	One male
<i>Daphnis dohertyi</i> Rothschild	Common
<i>Daphnis hypothous moorei</i> W.J. Macleay	Not uncommon
<i>Daphnis placida placida</i> Walker	Common
<i>Daphnis protrudens</i> R. Felder	One female
<i>Acosmeryx anceus anceus</i> (Stoll)	Common
<i>Nephele hespera</i> (Fabricius)	One male, one female
<i>Macroglossum vacillans</i> (Walker)	One male, three females
<i>Macroglossum corythus pylene</i> (C. Felder)	One male
<i>Macroglossum rectans</i> Rothschild & Jordan	One female
<i>Macroglossum dohertyi dohertyi</i> (Rothschild)	Three males
<i>Macroglossum micaceum micaceum</i> (Walker)	Large numbers over a few days
<i>Macroglossum tenebrosus</i> (Lucas)	One male
<i>Hippotion velox</i> (Fabricius)	Common
<i>Hippotion celerio</i> (Linnaeus)	Two males
<i>Hippotion rosetta</i> (Swinhoe)	Common
<i>Hippotion boerhaviae</i> (Fabricius)	Common
<i>Hippotion scrofa</i> (Boisduval)	Common
<i>Theretra nessus</i> (Drury)	Very common
<i>Theretra insularis insularis</i> (Swinhoe) *	One male
<i>Theretra clotho celata</i> (Butler)	Common
<i>Theretra indistincta</i> (Butler)	Common
<i>Theretra latreillii latreillii</i> (W.S.Macleay)	Not common
<i>Theretra oldenlandiae firmata</i> (Walker)	Common
<i>Theretra silhetensis intersecta</i> (Butler)	Common



Fig.1. *Acherontia lachesis* from Tabubil, Papua New Guinea.

Discussion

Fourteen species of hawk moths were collected during the 1987 survey and a further 17 were added to the list in 2004, including three species not previously recorded within Australian limits, viz. *Acherontia lachesis* (Fabricius) (Fig. 1), *Megacorma obliqua* (Walker) and *Theretra insularis insularis* (Swinhoe). Two further species, *Hippotion scrofa* (Boisduval) and *Nephele hespera* (Fabricius) have extended their previously recorded northern Australian ranges.

Despite intensive collecting by AIK over four and a half weeks during the 2004 survey, it is interesting to note that several species found in both Papua New Guinea and Australia were not encountered. Although Dauan Island is politically Australian, given its close proximity to the Papua New Guinea mainland it is clearly both geographically and faunistically part of Papua New Guinea, so the three new records from Australian territory are not surprising. *Acherontia lachesis* was first recorded by Moulds and Lachlan (1998), after having been collected by RBL in the Tabubil - Ok Tedi mine area (near the Indonesia / Papua New Guinea border) in numbers in 1993. Previously it was only known from India to the Moluccas and the Philippines but was unrecorded from the main island of New Guinea. As it has now been taken as far east as Madang in Papua New Guinea (Larry Orsak, pers. comm.), its newly detected presence in the northern Torres Strait may suggest it is moving south towards the Australian mainland.

Acknowledgements

We are most grateful to Chairperson Mrs Margaret Mau and her Dauan Island Council for permission to visit the island to survey the butterflies and hawk moths and for providing accommodation during the four and a half weeks spent on the island. We also thank Jeff Wright (Queensland Museum) for preparing the photograph. For comments on the manuscript we sincerely thank Dr Max Moulds (Australian Museum, Sydney).

References

- COMMON, I.F.B. 1990. *Moths of Australia*. Melbourne University Press, Carlton; vi + 535 pp, 32 pls.
- LACHLAN, R.B. 1988. New distribution records for some butterflies and hawk moths from far northern Queensland. *Australian Entomological Magazine* 14(6): 87-88.
- LACHLAN, R.B. 2004. Description of a second species of *Gnathothlibus* Wallengren (Lepidoptera: Sphingidae) from Australia. *Australian Entomologist* 31(3): 111-118.
- MOULDS, M.S. 1985. A review of the Australian hawk moths of the genus *Macroglossum* Scopoli (Lepidoptera: Sphingidae). *Australian Entomological Magazine* 12(5): 81-105.
- MOULDS, M.S. and LACHLAN, R.B. 1998. An annotated list of the hawk moths (Lepidoptera: Sphingidae) of Western Province, Papua New Guinea. *Australian Entomologist* 25(2): 45-60.